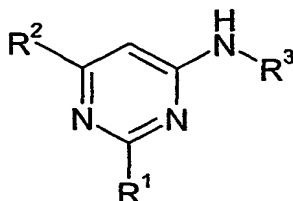


CLAIMS

1. A compound of formula (I)

5



(I)

wherein

10 R¹ and R² independently represent a monocyclic or polycyclic heteroaryl group optionally substituted by one or more substituents selected from the group consisting of halogen atoms, straight or branched, optionally substituted lower alkyl, cycloalkyl, hydroxy, straight or branched, optionally substituted lower alkoxy, -SH, straight or branched optionally substituted lower alkylthio, cyano, -NR'R'', -CO₂R', wherein R' and R'' each independently
 15 represents a hydrogen atom or a straight or branched, optionally substituted lower alkyl group or R' and R'' together with the nitrogen atom to which they are attached form a cyclic group;

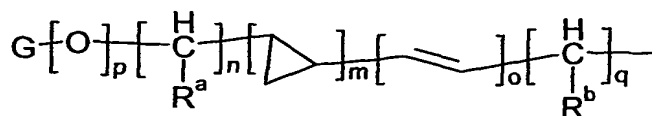
20

R³ represents a group selected from -COR⁴, -CON(R⁴)R⁵, -COOR⁴ and -R⁶

wherein R⁴ represents a group selected from:

25

- hydrogen atoms,
- a straight or branched lower alkyl group which is optionally substituted by one or more halogen atoms or by one or more cycloalkyl, hydroxy, lower alkoxy, lower alkylthio, amino, mono- or dialkylamino, alkoxyalkyl, hydroxycarbonyl, alkoxy carbonyl and nitrile groups;
- a group of formula:



30

wherein:

m, o and p are independently 0 or 1;

n and q are independently selected from integers from 0 to 6;

R^a and R^b are independently a hydrogen atom or a lower alkyl group;

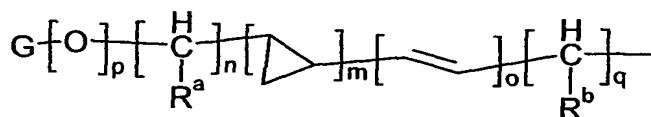
G is a group selected from cycloalkyl, aryl or heteroaryl groups which are optionally substituted by one or more halogen atoms or by one or more lower alkyl, cycloalkyl, lower haloalkyl, hydroxy, lower alkoxy, lower alkylthio, amino, mono- or dialkylamino, hydroxyalkyl, alkoxyalkyl, hydroxycarbonyl, alkoxycarbonyl and nitrile groups;

and R⁵ represents a hydrogen atom or a lower alkyl, cycloalkyl or benzyl group; or

R⁴ and R⁵ together with the nitrogen atom to which they are attached form a saturated or unsaturated ring which is optionally substituted by one or more lower alkyl, cycloalkyl or benzyl groups;

and R⁶ represents a group selected from:

- hydrogen atoms,
- a straight or branched lower alkyl group which is optionally substituted by one or more halogen atoms or by one or more cycloalkyl, hydroxy, lower alkoxy, lower alkylthio, amino, mono- or dialkylamino, alkoxyalkyl, hydroxycarbonyl, alkoxycarbonyl and nitrile groups;
- a group of formula:



wherein:

m, o and p are independently 0 or 1;

n and q are independently selected from integers from 0 to 6;

R^a and R^b are independently a hydrogen atom or a lower alkyl group;

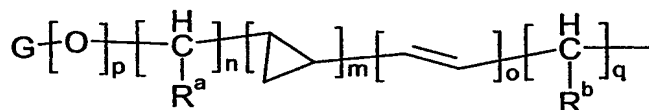
G is a group selected from cycloalkyl, aryl or heteroaryl groups which are optionally substituted by one or more halogen atoms or by one or more lower alkyl, cycloalkyl, lower haloalkyl, hydroxy, lower alkoxy, lower alkylthio, amino, mono- or dialkylamino, hydroxyalkyl, alkoxyalkyl, hydroxycarbonyl, alkoxycarbonyl and nitrile groups;

or pharmaceutically acceptable salts thereof;

with the proviso that the compound is not one of 2,6-dipyridin-4-ylpyrimidin-4-amine, 4-(3-methoxyanilino)-2,6-di(2-pyridinyl)pyrimidine, 4-(2,5-dimethoxyanilino)-2,6-di(2-pyridinyl)pyrimidine, 4-(5-methoxy-2-methylanilino)-2,6-di(2-pyridinyl)pyrimidine, 4-(2-methoxy-5-methylanilino)-2,6-di(2-pyridinyl)pyrimidine, 4-(2-chloro-5-methoxyanilino)-2,6-di(2-pyridinyl)pyrimidine, and 4-(2,5-dimethylanilino)-2,6-di(2-pyridinyl)pyrimidine.

2. A compound according to claim 1 wherein R⁶ represents a group selected from:

- hydrogen atoms,
- a straight or branched lower alkyl group which is optionally substituted by one or more halogen atoms or by one or more cycloalkyl, hydroxy, lower alkoxy, lower alkylthio, amino, mono- or dialkylamino, alkoxyalkyl, hydroxycarbonyl, alkoxycarbonyl and nitrile groups;
- a group of formula:



wherein:

m, o and p are independently 0 or 1;

n and q are independently selected from integers from 0 to 6;

R^a and R^b are independently a hydrogen atom or a lower alkyl group;

G is a group selected from cycloalkyl, aryl or heteroaryl groups which are optionally substituted by one or more halogen atoms or by one or more lower alkyl, cycloalkyl, lower haloalkyl, hydroxy, lower alkoxy, lower alkylthio, amino, mono- or dialkylamino, hydroxyalkyl, alkoxyalkyl, hydroxycarbonyl, alkoxycarbonyl and nitrile groups

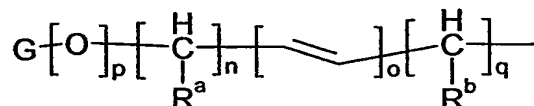
with the proviso that when p, m and o are simultaneously zero then G is not an optionally substituted aryl group.

3. A compound according to anyone of claims 1 or 2 wherein R¹ represents a monocyclic heteroaryl group selected from the group consisting of furyl, thienyl, thiazolyl, oxazolyl, pyrazinyl, pyrazolyl, pyridazinyl, imidazolyl, triazolyl, pyrimidinyl and pyridyl groups which groups are optionally substituted by one or more substituents selected from the group consisting of halogen atoms, straight or

branched, optionally substituted lower alkoxy and straight or branched, optionally substituted lower alkyl.

4. A compound according to claim 3 wherein R^1 represents a monocyclic heteroaryl group selected from the group consisting of furyl, thienyl, pyrazolyl, triazolyl, thiazolyl and pyridyl groups which groups are optionally substituted by one or more substituents selected from the group consisting of halogen atoms, straight or branched, optionally substituted lower alkoxy and straight or branched, optionally substituted lower alkyl.
5. A compound according to claim 4 wherein R^1 represents a monocyclic heteroaryl group selected from the group consisting of furyl, thienyl and pyrazolyl groups which groups are optionally substituted by one or more substituents selected from the group consisting of halogen atoms and straight or branched, optionally substituted lower alkyl.
6. A compound according to claim 5 wherein R^1 represents an unsubstituted furyl group.
7. A compound according to any preceding claim wherein R^2 represents a monocyclic heteroaryl group selected from the group consisting of pyrazolyl, furyl, thiazolyl, oxazolyl, pyridyl, pyrimidinyl, pyrazinyl, pyridazinyl, thienyl, imidazolyl and triazolyl groups which groups are optionally substituted by one or more substituents selected from the group consisting of halogen atoms, straight or branched, optionally substituted lower alkoxy and straight or branched, optionally substituted lower alkyl.
8. A compound according to claim 7 wherein R^2 represents a monocyclic heteroaryl group selected from the group consisting of pyrazolyl, furyl, thiazolyl, pyridyl, thienyl and triazolyl groups which groups are optionally substituted by one or more substituents selected from the group consisting of halogen atoms, straight or branched, optionally substituted lower alkoxy and straight or branched, optionally substituted lower alkyl.
9. A compound according to any preceding claim wherein R^4 and R^6 independently represent a group selected from:

- a straight or branched lower alkyl group which is optionally substituted by one or more halogen atoms;
- a group of formula:



5

wherein:

o and p are independently 0 or 1;

n and q are independently selected from integers from 0 to 6;

 R^a and R^b are independently a hydrogen atom or a lower alkyl group;

10

G is a group selected from cycloalkyl, aryl or heteroaryl groups which are optionally substituted by one or more halogen atoms or by one or more lower alkoxy groups;

and R^5 represents a hydrogen atom.

15

10. A compound according to any preceding claim wherein R^4 and R^6 independently represent a group selected from:

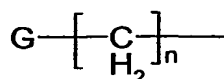
- hydrogen atoms,
- a straight or branched lower alkyl group which is optionally substituted by one or more halogen atoms;
- a group selected from cycloalkylalkyl, phenylalkyl, heteroarylalkyl, phenoxyalkyl and heteroaryloxyalkyl groups which groups are optionally substituted by one or more halogen atoms, by one or more lower alkyl groups or by one or more lower alkoxy groups;

20

 R^5 represents a hydrogen atom.

25

11. A compound according to any preceding claim wherein R^3 represents a hydrogen atom or a group selected from the groups of formula $-COR^4$; wherein R^4 represents a group of formula:



wherein:

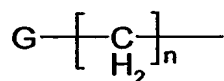
30

n is an integer selected from 0 or 1;

G is a group selected from phenyl or heteroaryl groups which phenyl and heteroaryl groups are optionally substituted by one or more halogen atoms, by one or more lower alkyl groups or by one or more lower alkoxy groups;

5 12. A compound according to any preceding claim wherein R¹ is a 2-furyl group and R² is a pyrazolyl group which is optionally substituted by one or more lower alkyl groups.

10 13. A compound according to claim 12 wherein R³ represents a hydrogen atom or a group selected from the groups of formula -COR⁴; wherein R⁴ represents a group of formula:



wherein:

n is an integer selected from 0 or 1;

15 G is a group selected from phenyl or heteroaryl groups which phenyl and heteroaryl groups are optionally substituted by one or more halogen atoms, by one or more lower alkyl groups or by one or more lower alkoxy groups

14. A compound according to claim 1 which is one of:

20 2-(2-Furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-amine;
N-[2-(2-Furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]acetamide;
N-[2-(2-Furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]propanamide;
N-[2-(2-Furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]-2-methylpropanamide;
N-[2-(2-Furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]-2,2-dimethyl-propanamide;
25 *N*-[2-(2-Furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]cyclopropane-carboxamide;
N-[2-(2-Furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]cyclobutane-carboxamide;
N-[2-(2-Furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]cyclohexane-carboxamide;
3-Cyclopentyl-*N*-[2-(2-furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl] propanamide;
N-[2-(2-Furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]-2-(4-methoxyphenyl) acetamide;
30 2-(3,4-Dimethoxyphenyl)-*N*-[2-(2-furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]acetamide;
N-[2-(2-Furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]-3-phenyl- propanamide;
(2*S*)-*N*-[2-(2-Furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]-2-phenyl-
cyclopropanecarboxamide;
3,3,3-Trifluoro-*N*-[2-(2-furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl] propanamide;

- 3-(3,4-Dimethoxyphenyl)-*N*-[2-(2-furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]propanamide;
N-[2-(2-Furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]-2-methyl-3-phenyl-propanamide;
N-[2-(2-Furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]-3-phenoxy-propanamide;
N-[2-(2-Furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]-3-pyridin-3-ylpropanamide;
5 *N*-[2-(2-Furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]-2-pyridin-3-yl-acetamide;
(2*E*)-3-(3,4-Dimethoxyphenyl)-*N*-[2-(2-furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]acrylamide;
6-(3,5-Dimethyl-1*H*-pyrazol-1-yl)-2-(2-furyl)pyrimidin-4-amine;
N-[6-(3,5-Dimethyl-1*H*-pyrazol-1-yl)-2-(2-furyl)pyrimidin-4-yl]acetamide;
10 *N*-[2-(3,5-Dimethyl-1*H*-pyrazol-1-yl)-6-(2-furyl)pyrimidin-4-yl] propanamide;
N-[6-(3,5-Dimethyl-1*H*-pyrazol-1-yl)-2-(2-furyl)pyrimidin-4-yl]-2-methyl-propanamide;
N-[6-(3,5-Dimethyl-1*H*-pyrazol-1-yl)-2-(2-furyl)pyrimidin-4-yl]-2,2-dimethylpropanamide;
N-[6-(3,5-Dimethyl-1*H*-pyrazol-1-yl)-2-(2-furyl)pyrimidin-4-yl]-
15 cyclopropanecarboxamide;
3-Cyclopentyl-*N*-[6-(3,5-dimethyl-1*H*-pyrazol-1-yl)-2-(2-furyl)pyrimidin-4-yl]propanamide;
N-[6-(3,5-dimethyl-1*H*-pyrazol-1-yl)-2-(2-furyl)pyrimidin-4-yl]-2-(4-methoxyphenyl)acetamide;
20 2-(3,4-Dimethoxyphenyl)-*N*-[6-(3,5-dimethyl-1*H*-pyrazol-1-yl)-2-(2-furyl)pyrimidin-4-yl]acetamide;
N-[6-(3,5-Dimethyl-1*H*-pyrazol-1-yl)-2-(2-furyl)pyrimidin-4-yl]-3-phenylpropanamide;
N-[6-(3,5-Dimethyl-1*H*-pyrazol-1-yl)-2-(2-furyl)pyrimidin-4-yl]-3,3,3-trifluoropropanamide;
25 3-(3,4-Dimethoxyphenyl)-*N*-[6-(3,5-dimethyl-1*H*-pyrazol-1-yl)-2-(2-furyl)pyrimidin-4-yl]propanamide;
N-[6-(3,5-Dimethyl-1*H*-pyrazol-1-yl)-2-(2-furyl)pyrimidin-4-yl]-3-phenoxypropanamide;
N-[6-(3,5-Dimethyl-1*H*-pyrazol-1-yl)-2-(2-furyl)pyrimidin-4-yl]-2-pyridin-3-ylacetamide;
N-[6-(3,5-Dimethyl-1*H*-pyrazol-1-yl)-2-(2-furyl)pyrimidin-4-yl]-3-pyridin-3-ylpropanamide;
30 2-(2-Furyl)-6-(4-methyl-1*H*-pyrazol-1-yl)pyrimidin-4-amine;
N-[2-(2-Furyl)-6-(4-methyl-1*H*-pyrazol-1-yl)pyrimidin-4-yl]-propanamide;
2-(2-Furyl)-6-(3-methyl-1*H*-pyrazol-1-yl)pyrimidin-4-amine;
N-[2-(2-Furyl)-6-(3-methyl-1*H*-pyrazol-1-yl)pyrimidin-4-yl]propanamide;
35 2-(2-Furyl)-6-[3-(trifluoromethyl)-1*H*-pyrazol-1-yl]pyrimidin-4-amine;

- N-{2-(2-Furyl)-6-[3-(trifluoromethyl)-1*H*-pyrazol-1-yl]pyrimidin-4-yl}-propanamide;
2-(2-Furyl)-6-[5-methyl-3-(trifluoromethyl)-1*H*-pyrazol-1-yl]pyrimidin-4-amine;
N-{2-(2-furyl)-6-[5-methyl-3-(trifluoromethyl)-1*H*-pyrazol-1-yl]-pyrimidin-4-yl}propanamide;
5 2-(2-Furyl)-6-(1*H*-1,2,4-triazol-1-yl)pyrimidin-4-amine;
N-[2-(2-furyl)-6-(1*H*-1,2,4-triazol-1-yl)pyrimidin-4-yl]acetamide;
N-[2-(2-Furyl)-6-(1*H*-1,2,4-triazol-1-yl)pyrimidin-4-yl]propanamide;
3,3,3-Trifluoro-*N*-[2-(2-furyl)-6-(1*H*-1,2,4-triazol-1-yl)pyrimidin-4-yl]-propanamide;
2-(5-Bromo-2-furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-amine;
10 *N*-[2-(5-bromo-2-furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]propanamide;
2-(5-Chloro-2-furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-amine;
N-[2-(5-Chloro-2-furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]propanamide;
2-(5-Methyl-2-furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-amine;
N-[2-(5-methyl-2-furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]propanamide;
15 *N*-[2-(2-Furyl)-6-pyridin-3-ylpyrimidin-4-yl]propanamide;
2-(2-Furyl)-6-pyridin-3-ylpyrimidin-4-amine;
6-(1*H*-Pyrazol-1-yl)-2-(2-thienyl)pyrimidin-4-amine;
N-[6-(1*H*-Pyrazol-1-yl)-2-(2-thienyl)pyrimidin-4-yl]acetamide;
N-[6-(1*H*-Pyrazol-1-yl)-2-(2-thienyl)pyrimidin-4-yl]propanamide;
20 3-Cyclopentyl-*N*-[6-(1*H*-pyrazol-1-yl)-2-(2-thienyl)pyrimidin-4-yl]propanamide;
3-Phenyl-*N*-[6-(1*H*-pyrazol-1-yl)-2-(2-thienyl)pyrimidin-4-yl]-propanamide;
3,3,3-Trifluoro-*N*-[6-(1*H*-pyrazol-1-yl)-2-(2-thienyl)pyrimidin-4-yl]-propanamide;
3-(3,4-Dimethoxyphenyl)-*N*-[6-(1*H*-pyrazol-1-yl)-2-(2-thienyl)pyrimidin-4-yl]propanamide;
25 3-Phenoxy-*N*-[6-(1*H*-pyrazol-1-yl)-2-(2-thienyl)pyrimidin-4-yl]-propanamide;
N-[6-(1*H*-Pyrazol-1-yl)-2-(2-thienyl)pyrimidin-4-yl]-2-pyridin-3-yl-acetamide;
N-[6-(1*H*-Pyrazol-1-yl)-2-(2-thienyl)pyrimidin-4-yl]-3-pyridin-3-ylpropanamide;
(2*E*)-3-(3,4-Dimethoxyphenyl)-*N*-[6-(1*H*-pyrazol-1-yl)-2-(2-thienyl)pyrimidin-4-yl]acrylamide;
30 6-(3,5-Dimethyl-1*H*-pyrazol-1-yl)-2-(2-thienyl)pyrimidin-4-amine;
N-[6-(3,5-Dimethyl-1*H*-pyrazol-1-yl)-2-(2-thienyl)pyrimidin-4-yl]-acetamide;
N-[6-(3,5-Dimethyl-1*H*-pyrazol-1-yl)-2-(2-thienyl)pyrimidin-4-yl]-propanamide;
N-[6-(3,5-Dimethyl-1*H*-pyrazol-1-yl)-2-(2-thienyl)pyrimidin-4-yl]-3,3,3-trifluoropropanamide;
35 2-(2-Thienyl)-6-(1*H*-1,2,4-triazol-1-yl)pyrimidin-4-amine;

- N*-[2-(2-Thienyl)-6-(1*H*-1,2,4-triazol-1-yl)pyrimidin-4-yl]acetamide;
N-[2-(2-Thienyl)-6-(1*H*-1,2,4-triazol-1-yl)pyrimidin-4-yl]propanamide;
3,3,3-Trifluoro-*N*-[2-(2-thienyl)-6-(1*H*-1,2,4-triazol-1-yl)pyrimidin-4-yl]propanamide;
N-[2-(3-Methyl-2-thienyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]-propanamide;
5 6-(2-Furyl)-2-(1*H*-pyrazol-1-yl)pyrimidin-4-amine;
N-[6-(2-Furyl)-2-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]acetamide;
N-[6-(2-Furyl)-2-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]propanamide;
3,3,3-Trifluoro-*N*-[6-(2-furyl)-2-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]-propanamide;
2-(3,5-Dimethyl-1*H*-pyrazol-1-yl)-6-(2-furyl)pyrimidin-4-amine;
10 *N*-[2-(3,5-Dimethyl-1*H*-pyrazol-1-yl)-6-(2-furyl)pyrimidin-4-yl]-propanamide;
N-[2-(3,5-Dimethyl-1*H*-pyrazol-1-yl)-6-(2-furyl)pyrimidin-4-yl]-2-(4-methoxyphenyl)acetamide;
6-(2-Furyl)-2-(1*H*-1,2,4-triazol-1-yl)pyrimidin-4-amine;
N-[6-(2-Furyl)-2-(1*H*-1,2,4-triazol-1-yl)pyrimidin-4-yl]propanamide;
15 2-(1*H*-Pyrazol-1-yl)-6-pyridin-2-ylpyrimidin-4-amine;
N-[2-(1*H*-Pyrazol-1-yl)-6-pyridin-2-ylpyrimidin-4-yl]propanamide;
2-(3,5-Dimethyl-1*H*-pyrazol-1-yl)-6-pyridin-2-ylpyrimidin-4-amine;
N-[2-(3,5-Dimethyl-1*H*-pyrazol-1-yl)-6-pyridin-2-ylpyrimidin-4-yl]propanamide;
N-[2-(3,5-Dimethyl-1*H*-pyrazol-1-yl)-6-pyridin-2-ylpyrimidin-4-yl]-2-(4-methoxyphenyl)acetamide;
20 2-(1*H*-Pyrazol-1-yl)-6-pyridin-3-ylpyrimidin-4-amine;
N-[2-(1*H*-Pyrazol-1-yl)-6-pyridin-3-ylpyrimidin-4-yl]propanamide;
2-(3,5-Dimethyl-1*H*-pyrazol-1-yl)-6-pyridin-3-ylpyrimidin-4-amine;
N-[2-(3,5-Dimethyl-1*H*-pyrazol-1-yl)-6-pyridin-3-ylpyrimidin-4-yl]-propanamide;
25 *N*-[2-(3,5-Dimethyl-1*H*-pyrazol-1-yl)-6-pyridin-3-ylpyrimidin-4-yl]-2-(4-methoxyphenyl)acetamide;
2-(1*H*-Pyrazol-1-yl)-6-pyridin-4-ylpyrimidin-4-amine;
N-[2-(1*H*-Pyrazol-1-yl)-6-pyridin-4-ylpyrimidin-4-amine];
6-(2-Furyl)-2-pyridin-2-ylpyrimidin-4-amine;
30 *N*-[6-(2-Furyl)-2-pyridin-2-ylpyrimidin-4-yl]propanamide;
2-(3-Methylpyridin-2-yl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-amine;
N-[2-(3-methylpyridin-2-yl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]propanamide;
6-(1*H*-Pyrazol-1-yl)-2-pyridin-3-ylpyrimidin-4-amine;
N-[6-(1*H*-Pyrazol-1-yl)-2-pyridin-3-ylpyrimidin-4-yl]acetamide;
35 *N*-[6-(1*H*-Pyrazol-1-yl)-2-pyridin-3-ylpyrimidin-4-yl]propanamide;

- 6-(3,5-Dimethyl-1*H*-pyrazol-1-yl)-2-pyridin-3-ylpyrimidin-4-amine;
N-[6-(3,5-Dimethyl-1*H*-pyrazol-1-yl)-2-pyridin-3-ylpyrimidin-4-yl]-acetamide;
N-[6-(3,5-Dimethyl-1*H*-pyrazol-1-yl)-2-pyridin-3-ylpyrimidin-4-yl]-propanamide;
N-[6-(3,5-Dimethyl-1*H*-pyrazol-1-yl)-2-pyridin-3-ylpyrimidin-4-yl]-3,3,3-
5 trifluoropropanamide;
2-Pyridin-3-yl-6-(1*H*-1,2,4-triazol-1-yl)pyrimidin-4-amine;
3,3,3-Trifluoro-*N*-[2-pyridin-3-yl-6-(1*H*-1,2,4-triazol-1-yl)pyrimidin-4-yl]propanamide;
6-(2-Furyl)-2-pyridin-3-ylpyrimidin-4-ylamine;
N-[6-(2-Furyl)-2-pyridin-3-ylpyrimidin-4-yl]propanamide;
10 *N*-[6-(3,5-Dimethyl-1*H*-pyrazol-1-yl)-2-pyridin-4-ylpyrimidin-4-yl]propanamide;
6-(3,5-dimethyl-1*H*-pyrazol-1-yl)-2-pyridin-4-ylpyrimidin-4-amine;
6-(2-Furyl)-2-pyridin-4-ylpyrimidin-4-ylamine;
N-[6-(2-Furyl)-2-pyridin-4-ylpyrimidin-4-yl]propanamide;
6-(2-Furyl)-2-(1,3-thiazol-2-yl)pyrimidin-4-amine;
15 *N*-[6-(2-Furyl)-2-(1,3-thiazol-2-yl)pyrimidin-4-yl]propanamide;
2-(4-Fluorophenyl)-*N*-[6-(2-furyl)-2-(1,3-thiazol-2-yl)pyrimidin-4-yl]acetamide;
N-(Cyclopropylmethyl)-2-(2-furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-amine;
(2*R*)-2-[[2-(2-Furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]amino]propan-1-ol;
3-[[2-(2-Furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]amino]propan-1-ol;
20 *N*-[2-(2-Furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]ethane-1,2-diamine;
2-(2-Furyl)-*N*-[2-(4-methoxyphenyl)ethyl]-6-(1*H*-pyrazol-1-yl)-pyrimidin-4-amine;
N-[2-(3,4-Dimethoxyphenyl)ethyl]-2-(2-furyl)-6-(1*H*-pyrazol-1-yl)-pyrimidin-4-amine;
2-(2-Furyl)-6-(1*H*-pyrazol-1-yl)-*N*-[2-(pyridin-2-yl)ethyl]pyrimidin-4-amine;
2-(2-Furyl)-6-(1*H*-pyrazol-1-yl)-*N*-[2-(pyridin-3-yl)ethyl]pyrimidin-4-amine;
25 2-(2-Furyl)-*N*-(3-phenylpropyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-amine;
2-(2-Furyl)-*N*-[3-(1*H*-imidazol-1-yl)propyl]-6-(1*H*-pyrazol-1-yl)-pyrimidin-4-amine;
N-(Cyclopropylmethyl)-6-(1*H*-pyrazol-1-yl)-2-(2-thienyl)pyrimidin-4-amine;
(2*R*)-2-[[6-(1*H*-Pyrazol-1-yl)-2-(2-thienyl)pyrimidin-4-yl]amino]propan-1-ol;
3-[[6-(1*H*-Pyrazol-1-yl)-2-(2-thienyl)pyrimidin-4-yl]amino]propan-1-ol;
30 *N*-(2-Aminoethyl)-*N*-[6-(1*H*-pyrazol-1-yl)-2-(2-thienyl)pyrimidin-4-yl]amine;
N-[2-(4-Methoxyphenyl)ethyl]-6-(1*H*-pyrazol-1-yl)-2-(2-thienyl)-pyrimidin-4-amine;
N-[2-(3,4-Dimethoxyphenyl)ethyl]-6-(1*H*-pyrazol-1-yl)-2-(2-thienyl)-pyrimidin-4-amine;
6-(1*H*-Pyrazol-1-yl)-*N*-(2-pyridin-3-ylethyl)-2-(2-thienyl)pyrimidin-4-amine;
6-(1*H*-Pyrazol-1-yl)-*N*-(2-pyridin-2-ylethyl)-2-(2-thienyl)pyrimidin-4-amine;
35 *N*-(3-Phenylpropyl)-6-(1*H*-pyrazol-1-yl)-2-(2-thienyl)pyrimidin-4-amine;

- N*-[3-(1*H*-imidazol-1-yl)propyl]-6-(1*H*-pyrazol-1-yl)-2-(2-thienyl)-pyrimidin-4-amine;
Ethyl 6-(1*H*-pyrazol-1-yl)-2-(2-thienyl)pyrimidin-4-yl]carbamate;
N-[2-(2-Furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]-*N'*-[(1*S**,2*R**)-2-phenylcyclopropyl]urea (* relative trans configuration);
- 5 *N*-[2-(2-Furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]-*N'*-propylurea;
N-[2-(2-Furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]-*N'*-isopropylurea;
N-Cyclopentyl-*N'*-[2-(2-furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]urea;
N-[2-(2-Furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]-*N'*-(4-methoxy-phenyl)urea;
N-[2-(2-Furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]-*N'*-(2-phenylethyl)-urea;
- 10 *N*-Benzyl-*N'*-[2-(2-furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]urea;
N-[2-(2-Furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]-3-methylbutanamide;
N-[2-(2-Furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]-3,3-dimethyl-butanamide;
N-[2-(2-Furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]cyclopentane-carboxamide;
2-Chloro-*N*-[2-(2-furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]-2-phenyl-acetamide;
- 15 *N*-[2-(2-Furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]-2-phenylacetamide;
2-(4-Fluorophenyl)-*N*-[2-(2-furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]acetamide;
N-[2-(2-Furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]-2-(3-methoxy-phenyl)acetamide;
N-[2-(2-Furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]-2-(2-methoxy-phenyl)acetamide;
2-(3,4-Dichlorophenyl)-*N*-[2-(2-furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]acetamide;
- 20 2-(1,3-Dibenzodioxol-5-yl)-*N*-[2-(2-furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]acetamide;
2-(3,4-Dihydroxyphenyl)-*N*-[2-(2-furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]acetamide;
2-(2,5-Dimethoxyphenyl)-*N*-[2-(2-furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]acetamide;
2-(4-Chloro-3-methylphenyl)-*N*-[2-(2-furyl)-6-(1*H*-pyrazol-1-yl)-pyrimidin-4-yl]acetamide;
- 25 2-(3,5-Dimethoxyphenyl)-*N*-[2-(2-furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]acetamide;
2-[3-(Benzyloxy)-4-methoxyphenyl]-*N*-[2-(2-furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]acetamide;
2-[4-(Cyclobutylloxy)-3-methoxyphenyl]-*N*-[2-(2-furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]acetamide;
- 30 *N*-[2-(2-Furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]-2-(4-difluoromethoxy-3-methoxyphenyl)acetamide;
N-[2-(2-Furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]-2-(3,4,5-trimethoxy-phenyl)acetamide;
- 35 2-(3,4-Dimethoxyphenyl)-*N*-[2-(2-furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]propanamide;
N-[2-(2-Furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]benzamide;

- N*-[2-(2-Furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]-3,4-dimethoxy-benzamide;
2,6-Difluoro-*N*-[2-(2-furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]-benzamide;
N-[2-(2-Furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]-2-furamide;
N-[2-(2-Furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]thiophene-2-carboxamide;
5 *N*-[2-(2-Furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]nicotinamide;
N-[2-(2-Furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]isonicotinamide;
N-[2-(2-Furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]-1-naphthamide;
N-[2-(2-Furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]quinoline-2-carboxamide;
10 (2*E*)-3-(3,4-Dimethoxyphenyl)-*N*-[6-(3,5-dimethyl-1*H*-pyrazol-1-yl)-2-(2-furyl)pyrimidin-4-yl]acrylamide;
2-(2-Furyl)-6-(2*H*-1,2,3-triazol-2-yl)pyrimidin-4-amine;
2-(2-furyl)-6-(1*H*-1,2,3-triazol-1-yl)pyrimidin-4-amine;
N-[2-(2-Furyl)-6-(2*H*-1,2,3-triazol-2-yl)pyrimidin-4-yl]propanamide;
2-(3,4-Dimethoxyphenyl)-*N*-[2-(2-furyl)-6-(2*H*-1,2,3-triazol-2-yl)-pyrimidin-4-yl]acetamide;
15 *N*-[2-(2-Furyl)-6-(1*H*-1,2,3-triazol-1-yl)pyrimidin-4-yl]propanamide;
2-(2-Furyl)-6-(1,3-thiazol-2-yl)pyrimidin-4-amine;
N-[2-(2-Furyl)-6-(1,3-thiazol-2-yl)pyrimidin-4-yl]propanamide;
3-(3,4-Dimethoxyphenyl)-*N*-[2-(2-furyl)-6-(1,3-thiazol-2-yl)pyrimidin-4-yl]propanamide;
20 2,6-Di-2-furylpyrimidin-4-amine;
N-(2,6-Di-2-furylpyrimidin-4-yl)-2-(3,4-dimethoxyphenyl)acetamide;
6-(1,3-Benzothiazol-2-yl)-2-(2-furyl)pyrimidin-4-amine;
2-(5-Methyl-2-furyl)-6-(1,3-thiazol-2-yl)pyrimidin-4-amine;
6-(1,3-Thiazol-2-yl)-2-(2-thienyl)pyrimidin-4-amine;
25 2-(3,4-Dimethoxyphenyl)-*N*-[6-(2-furyl)-2-(1,3-thiazol-2-yl)pyrimidin-4-yl]acetamide;
6-(1*H*-Pyrazol-1-yl)-2-(1,3-thiazol-2-yl)pyrimidin-4-amine;
2-(3,4-Dimethoxyphenyl)-*N*-[6-(1*H*-pyrazol-1-yl)-2-(1,3-thiazol-2-yl)pyrimidin-4-yl]acetamide;
2-(2-Furyl)-*N*-methyl-6-(1,3-thiazol-2-yl)pyrimidin-4-amine;
30 *N*-(Cyclopropylmethyl)-2-(2-furyl)-6-(1,3-thiazol-2-yl)pyrimidin-4-amine;
N-[2-(3,4-Dimethoxyphenyl)ethyl]-2-(2-furyl)-6-(1,3-thiazol-2-yl)-pyrimidin-4-amine;
N-(Cyclopropylmethyl)-6-(2-furyl)-2-(1,3-thiazol-2-yl)pyrimidin-4-amine;
N-[2-(3,4-Dimethoxyphenyl)ethyl]-6-(2-furyl)-2-(1,3-thiazol-2-yl)-pyrimidin-4-amine;
6-(2-Furyl)-*N*-(2-pyridin-3-ylethyl)-2-(1,3-thiazol-2-yl)pyrimidin-4-amine;
35 6-(2-Furyl)-*N*-[(1*S**,2*R**)-2-phenylcyclopropyl]-2-(1,3-thiazol-2-yl)-pyrimidin-4-amine (*)

relative trans configuration);

Ethyl [2-(2-furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]carbamate;

Cyclopentylmethyl [2-(2-furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]-carbamate;

Benzyl [2-(2-furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]carbamate;

5 3,4-Dimethoxybenzyl [2-(2-furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]carbamate;

Pyridin-3-ylmethyl [2-(2-furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]-carbamate;

4-Methoxyphenyl [2-(2-furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]-carbamate; and

3,4-Dimethoxyphenyl [2-(2-furyl)-6-(1*H*-pyrazol-1-yl)pyrimidin-4-yl]carbamate.

10 15. A compound according to any one of claims 1 to 14 for use in the treatment of a pathological condition or disease susceptible to amelioration by antagonism of an adenosine receptor.

15 16. A compound according to claim 15 for use in the treatment of a pathological condition or disease wherein the pathological condition or disease is ischemia, supraventricular arrhythmias, acute renal failure, myocardial reperfusion injury, allergic reactions including but not limited to rhinitis, urticaria, scleroderm arthritis, other autoimmune diseases, inflammatory bowel diseases; asthma, diabetes mellitus, obesity, Parkinson disease, Huntington's disease, dystonias such as
20 restless leg syndrome, dyskinesias such as those caused by prolonged use of neuroleptic and dopaminergic drugs or sleep disorders

25 17. A compound according to any one of claims 1 to 14 for use in the treatment of a pathological condition or disease susceptible to amelioration by antagonism of the adenosine A_{2A} receptor

30 18. A compound according to claim 17 for use in the treatment of a pathological condition or disease wherein the pathological condition or disease is ischemia, supraventricular arrhythmias, Parkinson disease, Huntington's disease, dystonias such as restless leg syndrome, dyskinesias such as those caused by prolonged use of neuroleptic and dopaminergic drugs or sleep disorders.

35 19. A pharmaceutical composition comprising a compound as defined in any one of claims 1 to 14 mixed with a pharmaceutically acceptable diluent or carrier.

20. Use of a compound as defined in any one of claims 1 to 14 in the manufacture of a medicament for the treatment of a pathological condition or disease susceptible of being improved by antagonism of the adenosine receptors.
- 5 21. Use of a compound according to claim 20 wherein the pathological condition or disease is ischemia, supraventricular arrhythmias, acute renal failure, myocardial reperfusion injury, allergic reactions including but not limited to rhinitis, urticaria, scleroderm arthritis, other autoimmune diseases, inflammatory bowel diseases, asthma, diabetes mellitus, obesity, Parkinson disease, Huntington's disease,
10 dystonias such as restless leg syndrome, dyskinesias such as those caused by prolonged use of neuroleptic and dopaminergic drugs or sleep disorders
- 15 22. Use of a compound as defined in any one of claims 1 to 14 in the manufacture of a medicament for the treatment of a pathological condition or disease susceptible of being improved by antagonism of the A_{2A} adenosine receptor.
- 20 23. Use according to claim 22, wherein the pathological condition or disease is ischemia, supraventricular arrhythmias, Parkinson disease, Huntington's disease, dystonias such as restless leg syndrome, dyskinesias such as those caused by prolonged use of neuroleptic and dopaminergic drugs or sleep disorders.
- 25 24. A method for treating a subject afflicted with a pathological condition or disease susceptible to amelioration by antagonism of an adenosine receptor, which comprises administering to said subject an effective amount of a compound as defined in any one of claims 1 to 14.
- 30 25. A method according to claim 24 wherein the pathological condition or disease is ischemia, supraventricular arrhythmias, acute renal failure, myocardial reperfusion injury, allergic reactions including but not limited to rhinitis, urticaria, scleroderm arthritis, other autoimmune diseases, inflammatory bowel diseases, asthma, diabetes mellitus, obesity, Parkinson disease, Huntington's disease, dystonias such as restless leg syndrome, dyskinesias such as those caused by prolonged use of neuroleptic and dopaminergic drugs or sleep disorders.

26. A method for treating a subject afflicted with a pathological condition or disease susceptible to amelioration by antagonism of the A_{2A} adenosine receptor, which comprises administering to said subject an effective amount of a compound as defined in any one of claims 1 to 14.

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27. A method according to claim 26 wherein the pathological condition or disease is ischemia, supraventricular arrhythmias, Parkinson disease, Huntington's disease, dystonias such as restless leg syndrome, dyskinesias such as those caused by prolonged use of neuroleptic and dopaminergic drugs or sleep disorders.

10

28. A combination product comprising a compound according to any one of claims 1 to 14; and another compound selected from (a) L-DOPA, (b) dopamine antagonists, (c) inhibitors of dopamine decarboxylase (d) catechol-O-methyltransferase inhibitors and (e) inhibitors of monoamine oxidase for simultaneous, separate or sequential use.

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29. A compound according to claim 1 wherein R³ is -COR⁴.

30. A compound according to claim 29 wherein R² is pyrazol, substituted pyrazol, thiazol or substituted thiazol and R¹ is furan or substituted furan.

20

31. A compound according to claim 30 wherein R² is pyrazol or thiazol and R¹ is furan or methylfuran.

25

32. A compound according to claim 29 wherein R⁴ is monoalkylaminoalkyl or dialkylaminoalkyl.

33. A compound according to claim 32 wherein the compound is selected from the group of:

30

N-(2-furan-yl-6-pyrazol-1-yl-pyrimidin-4-yl)-2-methylamino acetamide;
2-Dimethylamino-N-(2-furan-2-yl-6-pyrazol-1-yl-pyrimidin-4-yl) acetamide;
2-Methylamino-N-[2-(5-methylfuran-2-yl)-6-thiazol-2-yl-pyrimidin-4-yl] acetamide;
and 2-Diethylamino-N-[2-(5-methylfuran-2-yl)-6-thiazol-2-yl-pyrimidin-4-yl]
acetamide.

35

34. A compound according to claim 31 wherein the compound is N-[2-(5-Methylfuran-2-yl)-6-thiazol-2-yl-pyrimidine-4-yl]-2-pyridin-3-yl-propionamide or N-[2-(5-Methylfuran-2-yl)-6-thiazol-2-yl-pyrimidine-4-yl]-3-pyridin-3-yl-propionamide.